#5

OIPE

RAW SEQUENCE LISTING DATE: 09/19/2001 PATENT APPLICATION: US/09/775,938A TIME: 10:32:03

Input Set : A:\09-775938 Sequence listing.txt
Output Set: N:\CRF3\09192001\1775938A.raw

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                                                                INTERED
             Davidson, S.K.
              Allen, S.W.
      6
              Hildebrand, M.
      9 <120> TITLE OF INVENTION: Bryostatins, Bryopyrans and Polyketides: Compositions and
Methods
    11 <130> FILE REFERENCE: 1133.010US1
     13 <140> CURRENT APPLICATION NUMBER: US 09/775,938A
C--> 14 <141> CURRENT FILING DATE: 2001-08-30
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    17 <151> PRIOR FILING DATE: 2000-08-04
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     20 <151> PRIOR FILING DATE: 1999-08-04
     22 <160> NUMBER OF SEQ ID NOS: 38
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RAW SEQUENCE LISTING PATENT APPLICATION: US/09/775,938A

DATE: 09/19/2001 TIME: 10:32:03

Input Set : A:\09-775938 Sequence listing.txt
Output Set: N:\CRF3\09192001\1775938A.raw

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144	acgattcatt gtgaggatgt aaacccacag attgcgttgg aaggtagccc cttttatatc	240
145	aatacggaat taaagccttg gcagtctggt gacggtatac cacgacgggc tggtgtcagt	300
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147	acatcaccat tacaaaatac tattttaccc cagaacggtt tgtttattgt tccactatct	420
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Input Set : A:\09-775938 Sequence listing.txt
Output Set: N:\CRF3\09192001\I775938A.raw

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Output Set: N:\CRF3\09192001\I775938A.raw

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252			35					40					45				
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268 269 270 271	gagta cagaa ggggg caat	atgg aaaa gtat taca	gag a atc g att d act g	atcca gtttg ctgga gcaaa	aatgo gctgo actgo agaao	gt co at ca cc ga	ggato aaago agtco	cagta cagta ctcai	a aaa a ctg a atc	agcca ggcaa cccci	aata atgc tgga	ttag agca aacg	gtcac atggc gtctc	cct o	ggaag gatto totog	gcagcc ccacag	120 180 240 300
268 269 270 271 272	gagta cagaa ggggg caat	atgo aaaa gtat taca aaga	gag a atc g att d act g	atcca gtttg ctgga gcaaa	aatgo gctgo actgo agaao	gt co at ca cc ga	ggato aaago agtco	cagta cagta ctcai	a aaa a ctg a atc	agcca ggcaa cccci	aata atgc tgga	ttag agca aacg	gtcac atggc gtctc	cct o	ggaag gatto totog	gcagcc ccacag gatttg	120 180 240
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268 269 270 271 272 273 275 276 277 278 280 281 282 283	gagta cagaa ggggg caatt gtaca gatta <210: <211: <212: <400: Glu	atgg aaaa gtat taca aaga > SI > TY > OF TYr	yag a atc g act o agc a y EQ II EQUEN EQUEN Gly	atcca gtttg gtaaa gcaaaa gcaaaa gcaaaa gcaaa gcaa gcaaa gcaaa gcaa gcaa gcaa gcaaa gcaaa gcaaa gcaaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaaa gcaa gcaaa gcaaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaaa gcaaa gcaa gcaaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaa gcaa g	aatgg gctgg actga agaac cgtct : 18)1 Endo 18 Pro	gt coat catco	ggato aaago agto cogga ula s	cagta cagta ctcat aaagt sertu	a aaaa ctgaaca gaaaaa gaaaaa gaaaa gaaaa gaaaa gaaaa gaaaa gaaa gaaa gaaa gaaa gaaa gaaa gaaa gaaaa gaaaa gaaa	agcca ggcaa cccct agago Ala 10	aata atgc tgga cgga	ttag agca aacg tcgc	gtcac atggo gtcto oggot	val	ggaaggatto gatto totog aacag Phe 15	geagee ecacag gatttg gegteg	120 180 240 300
268 269 270 271 272 273 275 276 277 278 280 281 282 283 284	gagta cagaa ggggg caat gtaca gatta <2103 <2113 <2123 <4003 Glu 1 Arg (atggaaaaggtattacaaggay SE> CE> TY> CE	yag a atc g att o agc a ge g EQ II ENGTH YPE: RGANI EQUEN Gly	atcca gtttg gtaaa gcaaaa gcaaaa gcaaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaa gcaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaaa gcaaa gcaaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaaa gcaa gcaaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gca	aatgggctggactgaacgtct : 18)1 Endo 18 Pro 5 Gln	gt coat cace gates	ggato aaago agto cogga ula s Glu Asn	cagta cagta ctcat aaagt sertu Leu	a aaa a ctg a atc c gaa ula Thr Leu 25	Ala Leu	aata atgc tgga cgga Ala Val	agca aacg tcgc	gtcac atggo gtctc cggct	val	ggaaggatto gatto totog aacag Phe 15 Lys	gcagcc ccacag gatttg gcgtcg Gly Ala	120 180 240 300
268 269 270 271 272 273 275 276 277 280 281 282 283 284 285	gagta cagaa ggggg caat gtaca gatta <210: <211: <212: <400: Glu	atggaaaaggtattacaaggay SE> CE> TY> CE	yag a att of the control of the cont	atcca gtttg gtaaa gcaaaa gcaaaa gcaaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaa gcaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaaa gcaaa gcaaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaa gcaa gcaaa gcaa gcaaa gcaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gcaaa gca	aatgggctggactgaacgtct : 18)1 Endo 18 Pro 5 Gln	gt coat cace gace gace gace gace gace gace gace	ggato aaago agto cogga ula s Glu Asn	cagta cagta ctcat aaagt sertu Leu Arg	a aaa a ctg a atc c gaa ula Thr Leu 25	Ala Leu	aata atgc tgga cgga Ala Val	agca aacg tcgc	gtcac atggo gtctc cggct Ala Ser Gly	val	ggaaggatto gatto totog aacag Phe 15 Lys	gcagcc ccacag gatttg gcgtcg Gly Ala	120 180 240 300
268 269 270 271 272 273 275 276 277 280 281 282 283 284 285 286	gagta cagaa ggggg caat gtaca gatta <2103 <2113 <2123 <4003 Glu 1 Arg (atgg aaaa gtat taca aaga > SE > LE > TY CGly Ile	yag a att of the control of the cont	atcca gtttg gtaaa gcaaa agact D NO: H: 10 PRT ISM: NCE: Asp Asn 20 His	aatgggctggactgaacgtct : 18)1 Endo 18 Pro 5 Gln Leu	gt control at cace gar control bugu Met Lys Glu	ggato aaago agto ccgga ula s Glu Asn Ala	cagta cagta cagta ctcat aaagt sertu Leu Arg Ala 40	a aaa a ctg a atc gaa ula Thr Leu 25 Gly	Ala 10 Leu	aata atgc tgga cgga Ala Val	Ala Gly Ser	Ala Ser Gly 45	Val Val Leu	ggaaggatto totog aacag Phe 15 Lys	gcagcc ccacag gatttg gcgtcg Gly Ala Lys	120 180 240 300
268 269 270 271 272 273 275 276 277 280 281 282 283 284 285 286 287	gagta cagaa ggggg caat gtaca gatta <210 <211 <212 <213 <400 Glu 1 Arg (atgg aaaa gtat taca aaga > SE > LE > TY CGly Ile	yag a att of the control of the cont	atcca gtttg gtaaa gcaaa agact D NO: H: 10 PRT ISM: NCE: Asp Asn 20 His	aatgggctggactgaacgtct : 18)1 Endo 18 Pro 5 Gln Leu	gt control at cace gar control bugu Met Lys Glu	ggato aaago agto ccgga ula s Glu Asn Ala His	cagta cagta cagta ctcat aaagt sertu Leu Arg Ala 40	a aaa a ctg a atc gaa ula Thr Leu 25 Gly	Ala 10 Leu	aata atgc tgga cgga Ala Val	Ala Gly Ser Gln	Ala Ser Gly 45	Val Val Leu	ggaaggatto totog aacag Phe 15 Lys	gcagcc ccacag gatttg gcgtcg Gly Ala Lys	120 180 240 300
268 269 270 271 272 273 275 276 277 280 281 282 283 284 285 286 287 288	gagta cagaa ggggg caat gtaca gatta <210 <211 <212 <213 <400 Glu 1 Arg (Asn :	atgg aaaa gtat taca aaga > SE > TY > OF TYT Gly Ile Val	yag a atc g att o agc a y EQUEN CEQUEN Gly Arg Ser 35 Leu	atcca gtttg gtggaa gcaaa ggact D NO: H: 10 PRT ISM: NCE: Asp Asn 20 His	aatgggctggactgaacgtct : 18)1 Endo 18 Pro 5 Gln Leu	obugu Met Lys Glu Gln	ggato aaago agto ccgga ula s Glu Asn Ala His 55	cagta cagta ctcat aaagt sertu Leu Arg Ala 40 Gly	a aaaa ctgc atc gaaalla Thr Leu 25 Gly	Ala 10 Leu Gly	aata atgc tgga cgga Ala Val Ile	Ala Gly Ser Gln	Ala Ser Gly 45 Gln	Val Val Leu	ggaaggattotogaacag	gcagcc ccacag gatttg gcgtcg Gly Ala Lys Cys	120 180 240 300
268 269 270 271 272 273 275 276 277 278 280 281 282 283 284 285 286 287 288 289	gagta cagaa ggggg caat gtaca gatta <2100 <2110 <2120 <2130 <4000 Glu 1 Arg (Asn 1)	atgg aaaa gtat taca aaga > SE > TY > OF TYT Gly Ile Val	yag a atc g att o agc a y EQUEN CEQUEN Gly Arg Ser 35 Leu	atcca gtttg gtggaa gcaaa ggact D NO: H: 10 PRT ISM: NCE: Asp Asn 20 His	aatgggctggactgaacgtct : 18)1 Endo 18 Pro 5 Gln Leu	pt control of the con	ggato aaago agto ccgga ula s Glu Asn Ala His 55	cagta cagta ctcat aaagt sertu Leu Arg Ala 40 Gly	a aaaa ctgc atc gaaalla Thr Leu 25 Gly	Ala 10 Leu Gly	Ala Val Ile Pro Arg	Ala Gly Ser Gln	Ala Ser Gly 45 Gln	Val Val Leu	ggaaggattotogaacag	gcagcc ccacag gatttg gcgtcg Gly Ala Lys Cys	120 180 240 300
268 269 270 271 272 273 275 276 277 278 280 281 282 283 284 285 286 287 288 289 290	gagta cagaa ggggg caata cagatta callo ca callo ca callo ca callo ca callo ca callo ca ca ca ca ca ca ca ca ca ca ca ca ca	atgg aaaa gtat taca aagc SE > TY > TY Gly Ile Val 50 Glu	gag a strong control of the strong control o	atcca gtttg gtggaaa ggact D NO: H: 10 PRT ISM: NCE: Asp Asn 20 His Ala	aatgggctggactgacgtct : 18)1 Endo 18 Pro Gln Leu Met	obugu Met Lys Glu Gln His	ggato aaago agto ccgga ala s Glu Asn Ala His 55 Ile	sertu Arg Ala 40 Gly Pro	a aaaa ctgc atc atc gas	Ala 10 Leu Lys	Ala Val Ile Pro Arg 75	Ala Gly Ser Gln 60 Leu	Ala Ser Gly 45 Gln Pro	Val Val Jeu Leu Leu	Phe 15 Lys Ile	gcagcc ccacag gatttg gcgtcg Gly Ala Lys Cys Leu 80	120 180 240 300
268 269 270 271 272 273 275 276 277 278 280 281 282 283 284 285 286 287 288 289 290	gagta cagaa ggggg caat gtaca gatta <2100 <2110 <2120 <2130 <4000 Glu 1 Arg (Asn 1)	atgg aaaa gtat taca aagc SE > TY > TY Gly Ile Val 50 Glu	gag a strong control of the strong control o	atcca gtttg gtggaaa ggact D NO: H: 10 PRT ISM: NCE: Asp Asn 20 His Ala	aatgggctggactgacgtct : 18)1 Endo 18 Pro Gln Leu Met	obugu Met Lys Glu Gln His	ggato aaago agto ccgga ala s Glu Asn Ala His 55 Ile	sertu Arg Ala 40 Gly Pro	a aaaa ctgc atc atc gas	Ala 10 Leu Lys	Ala Val Ile Pro Arg 75	Ala Gly Ser Gln 60 Leu	Ala Ser Gly 45 Gln Pro	Val Val Jeu Leu Leu	Phe 15 Lys Ile	gcagcc ccacag gatttg gcgtcg Gly Ala Lys Cys Leu 80	120 180 240 300

Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

DATE: 09/19/2001 TIME: 10:32:04

PATENT APPLICATION: US/09/775,938A

Input Set : A:\09-775938 Sequence listing.txt
Output Set: N:\CRF3\09192001\1775938A.raw

L:37 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 L:50 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 L:388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 L:625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:628 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:648 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:649 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:650 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:651 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:655 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:661 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:662 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:664 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:665 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:676 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:685 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:686 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:687 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:689 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:693 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:700 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:701 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:702 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:703 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 L:716 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:732 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:733 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:734 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 $L\!:\!735$ $M\!:\!341$ W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:737 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:739 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:740 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:759 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:761 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:763 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:764 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:776 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:782 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:789 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/775,938A

DATE: 09/19/2001

TIME: 10:32:04

Input Set : A:\09-775938 Sequence listing.txt
Output Set: N:\CRF3\09192001\I775938A.raw

L:796 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:797 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 L:799 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31